1 Interview Summaries

1.1 Focus Group for Universities & Educators

Interview Type	Focus Group
Interview Location	Bureau of Information Systems Building, Augusta
Interview Date	November 7, 2001
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Interviewer	AGI / Michael Terner (mgt@appgeo.com)
Interviewed:	Sari Hou, Ph.D., Unity College, sarihou@unity.unity.edu Peter Schilling, Bowdoin College, pschilli@bowdoin.edu David Firmage, Colby College Thomas Eastler, Ph.D., University of Maine, Farmington, eastler@maine.maine.edu Daniel Buckley, Ph.D., University of Maine, Farmington, buckley@maine.edu Kathleen McAnney, Ph.D., University of Maine, Farmington Michael Crowley, Maine Technical College System, mcrowley@mtcs.net Matthew Bampton, University of Southern Maine, bampton@usm.maine.edu

1.1.1 Overview

Attendees represented people involved in GIS education at the University level. The majority of attendees were professors and researchers at both private and public colleges and universtities. Participants included:

- Sari Hou, Ph.D., Professor of Liberal Studies – Computer Science, Unity College
- Peter Schilling, Director Educational Technology Center, Bowdoin College
- David Firmage, Professor of Biology, Colby College
- Thomas Eastler, Ph.D., Professor of Geology, University of Maine, Farmington
- Daniel Buckley, Ph.D., Professor of Biology, University of Maine, Farmington
- Kathleen McAnney, Ph.D., Professor of Geography, University of Maine, Farmington
- Michael Crowley, Director of Information Technology, Maine Technical College System
- Matthew Bampton, Assistant Professor of Geography and Anthropology, University of Southern Maine

All participants in the focus group were active users and/or instructors in GIS technology, with the exception of Mr. Crowley. The following provides a very brief overview of some of their initiatives.

Dr. Hou of Unity College described active teaching of GIS concepts and software as well as practice oriented research for both the Sebasco Watershed Association and upcoming work for the Maine Organic Farming Commission.

Peter Schilling described a wide variety of GIS oriented initiatives at Bowdoin including: modeling coastal ecosystems and watersheds within Biology Dept. and tracking language migration and Maine dialects of French within the English Dept.

Professor Firmage described extensive watershed mapping and modeling work being conducted at Colby.

Dr. Eastler described UM Farmington's active research and consulting for gravel bar mapping for the Maine Geological Survey as well as active support of the Town of Farmington's Comprehensive Plan development.

Dr. Buckley described UM Farmington's active GIS in work for Maine DEP in conducting lake watershed work on invasive aquatic plants as well as internal UMF work to support the environmental impact statement (EIS) for construction of a new university building.

Dr. McAnney described UM Farmington's active GIS work in conducting economic development analysis for Franklin County in concert with the Franklin County Development Corporation as well as active work at applying GIS to health care facilities within Franklin County.

Mr. Crowley described an increasing interest within the Maine Technical College system in adding GIS as a topic of instruction. He is actively assessing how to add this capability to the MTCS.

Professor Bampton, described myriad GIS-based initiatives within USM including: mapping tick habitat to support lyme disease health concerns; collaborative efforts with the University of New Hampshire to better map and understand literal salt marshes; working with the state on preservation of archaeological sites; and GPS-based effort to complete precision mapping of very small geological structures.

1.1.2 Business Functions

The principal business functions of this focus group that intersect with GIS are simple:

- Providing GIS instruction to students
- Supporting faculty/student research initiatives, and
- Assisting the educational institutions in providing valuable work product back to sponsoring agencies such as host communities or state agencies.

1.1.3 Data

Almost all participants were deeply familiar with the MeGIS data offerings and used these extensively. Almost all participants had experience with, and very positive feedback on the digital ortho quarter quadrangles (DOQQ's). That said, there was some frustration with the formatting and indexing of the MeGIS data sets. In particular Focus group participants described frustration with:

- Working with the highly tiled MeGIS data sets. Most research involved larger study areas and it was time consuming to have to navigate multiple tiles, for multiple layers to construct a project data set.
- Limited availability of strong human oriented attribute data sets. The Focus Group strongly encouraged MeGIS to investigate expanding the attribute data offerings in its database to include such things as current **and** historic census information as well as wider variety of census data variable (especially ethnicity and native language).

Many participants described university initiatives that created new data sets. The Focus Group acknowledged that their own metadata tracking habits were mediocre and in need of improvement, and that state guidance could be beneficial. Of the data sets discussed, a couple stood out as candidates for potential gathering and inclusion in a statewide database. These included:

- Bathymetric mapping of lake bottoms (UMF)
- Archaeological sites and status of preservation (USM). These data might require their confidentiality to be preserved.

1.1.4 Statewide GIS Initiative Needs

Participants had a number of ideas for initiatives that the State could undertake to support GIS in Maine.

- **Facilitation of group purchases of software:** Almost all entities described enormous challenges in obtaining funding for relatively expensive GIS software licenses. These challenges are exacerbated by the GIS industry's propensity to continually offer new products for purchase. The entire group felt strongly that the University community, could and should be included in state "bulk" purchases of GIS software and equipment. Similarly, all parties were interested in potential "license pool sharing" that would enable third parties to access state GIS licenses on a periodic basis.

  The group observed that after years of coordination the University of Maine system has *finally*, after several years of planning, completed negotiations with ESRI for obtaining ESRI university site licenses. While this represents a move forward, the site licenses still amount to a significant expenditure. In addition, entities such as Unity and the MTCS would **not** currently qualify to participate in the site license program. All participants noted with some befuddlement that the University of Maine at Orono elected to **not** participate in the site license program. As the state's largest university and most active GIS program this position was not understood by the focus group.

- **Facilitation of group training opportunities:** The focus group noted that obtaining appropriate GIS training for new software and technology was also difficult to arrange in the current environment. Again, having the state offer training opportunities, or group purchase price benefits to the university community was strongly advocated for.

- **Participation in Regional Service Center programs:** Some members of the University of Maine system noted that the universities might be in a position to help offer regional support via a "regional geographic service center" model. In particular, it was noted that the campuses at Fort Kent and Presque Isle might provide effective support to the geographically isolated areas that surround them.
- **Provision of a Metadata Framework:** As described above, metadata tracking efforts within the university community can be lacking. The focus group indicated that state leadership on this issue – e.g. development of standards and enforcement mechanisms – would be welcome.
- **Support of Maine Geographic Alliance:** The Maine Geographic Alliance (see: http://www.carrabec.sad74.k12.me.us/MGAhome.html) is an organization established to "promoting geography education in Maine". Several of the focus group participants are engaged in this group which tackles both higher education and K-12 requirements. It was observed that state support of this group – e.g. establishment of GIS infrastructure – could help further the goals of broader GIS awareness throughout the state.

1.1.5 Major Benefits and Cost Justification

The focus group cataloged a number of benefits that statewide support of university initiatives would engender. These benefits include:

- **Providing Good Careers to Citizens**: Participants noted that there had been wide success in placing GIS students with professional organizations after graduation. Placements in Maine included: Maine Geological Survey, DOT, DEP, Maine National Guard, Blue Marble Geographics, James Sewall Company, Northern Geomantics and ESRI.
- **Pro Bono Research**: As described above, this community performs important research, often using its own resources and the labor of students who are actively involved in learning through these real-world projects. Projects ranges from mapping bathymetry in Maine lakes to assisting the Town of Farmington in peforming a Comprehensive Plan to understanding and describing gravel bar deposits in Maine riverways.
- **Providing Resources to Apply Technical Assistance and Spread the Word About GIS:** The academic community is a visible, vocal and articulate spokesmen for the need and benefits of GIS. Once properly enabled, this group can help educate the citizenry to the benefits of GIS and can even help provide direct services to the far reaches of Maine (e.g. Fort Kent and Presque Isle) where other types of support may be lacking. Right now, the community spends inordinate amounts of time fighting for simple resources such as adequate software licenses. Ideally, this type of effort could be replaced by further outreach to the community and more teaching.

Overall, participants felt that a statewide GIS initiative would increase GIS use and spread knowledge about the appropriate use GIS technology tools.